Delivering a Technology Enabled Experience in Education

About the event

In March 2020 global education and technology leaders attended a round table event in Melbourne.

The round table was staged to create a peer-to-peer forum to discuss institutional priorities and the role that technology will play in improving student engagement, learning outcomes, experience and administrative efficiency. It occurred against a backdrop of major climate events and COVID-19 presenting new challenges and opportunities for technology leaders.

The event had three distinct parts:

1. **Global and Regional insights and perspectives from Cisco's President Asia Pacific and Japan, Miyuki Suzuki, and Cisco Vice President Australia and New Zealand, Ken Boal.**

2. **A series of presentations and panel sessions related to digital strategy development and execution.**

3. **A deep dive into digital innovation at Cisco's Health Transformation Lab at RMIT University.**

Extraordinary times, or the new normal?

The round table was held against the backdrop of an escalating COVID-19 outbreak which had caused universities to create urgent workarounds for mostly Chinese students stranded in their home country, and development of contingency plans in the event that staff and domestic students might have to self-isolate. The COVID-19 outbreak compounded extreme weather events and bushfires in the months previous which had fuelled volatility in the domestic and global economy.

There was broad agreement among round table attendees that these kinds of events and global shocks needed to be viewed as a potential `new normal' rather than a one-off crisis. With this understanding, the role of technology and technology leaders will become more vital in how to navigate the challenges and to enable new emerging business models and market transitions.

Extreme events have put a spotlight on digital resilience of our education sector

In the face of compounding crises some institutions and systems have proved to more resilient and prepared than others in terms of their capacity to facilitate off campus learning, continuity of critical student services and ability to maintain student engagement and communications. It was also apparent that a university's ability to securely scale its systems and infrastructure had never been more important. The Victorian Department of Education and Training, as an example, has rolled out Cisco Webex collaboration infrastructure on a state-wide basis and the capacity to facilitate remote learning and teacher professional development using its digital platform.

A number of education institutions spoke of the need for resource prioritisation to change, particularly the proportion of expenditure directed towards physical buildings compared to digital capability. Some universities, as an example, are considering delays to building works in the wake of COVID-19 and re-investing planned expenditure into digital platforms and services that can be accessed by all students regardless of location. The physical campus will remain a critical asset for universities but recent events related to the COVID-19 pandemic have highlighted that provision of engaging learning and a compelling student experience are expectations regardless of whether students are on campus or not.

Education needs to accelerate digital implementation and execute faster

The round tables revealed that institutions and education systems by and large are following a reasonably consistent path to digital, albeit that many are at different stages of the journey. Typically that journey starts with a diagnosis of the current environment and strategic priorities, identification of problems that can be solved with digital, getting the right infrastructure in place and then having the mechanisms to deliver continuous innovation and realise benefits.

Universities revealed that recent crises had not reduced planned investment in digital, and in some cases had the opposite effect. CIOs were now under pressure to fast-track the most strategic initiatives (including Smart Classroom, Virtual Learning and activity-based working) to improve their digital resilience.
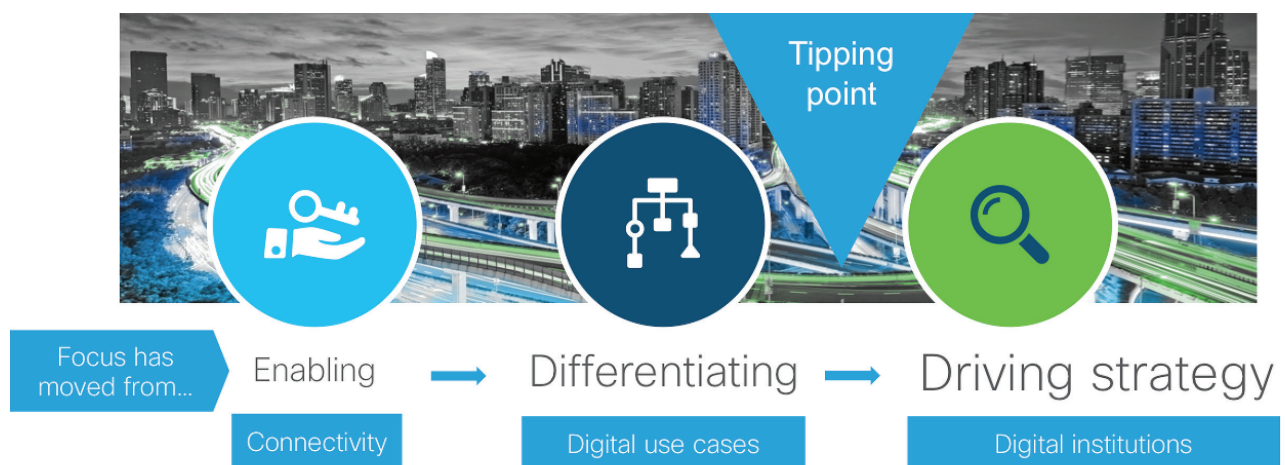
These urgent works needed to happen in parallel to systematic innovation, some of which was showcased at the round table event such as:

- A range of innovative programs being run at Curtin University related to teaching and learning including the development of a Challenge Platform built on Webex tools which allow students to collaborate globally around practical industry challenges

- Projects being pursued by the Health Transformation Lab using digital to tackle issues as diverse as loneliness, reduced motor function and autism

Digital is now driving education strategy, not just an enabler

Universities, TAFEs and K12 education systems are adopting a digital first mentality which has elevated technology from being an enabler and differentiator to a key driver of wider organisation strategy. This is demonstrated in the COVID-19 response but is true in more general sense. A tipping point has been reached where digital is anchoring wider business strategy.

Digital Driving Education Strategy

Focus has moved from...   Enabling → Differentiating → Driving strategy

Connectivity   Digital use cases   Digital institutions
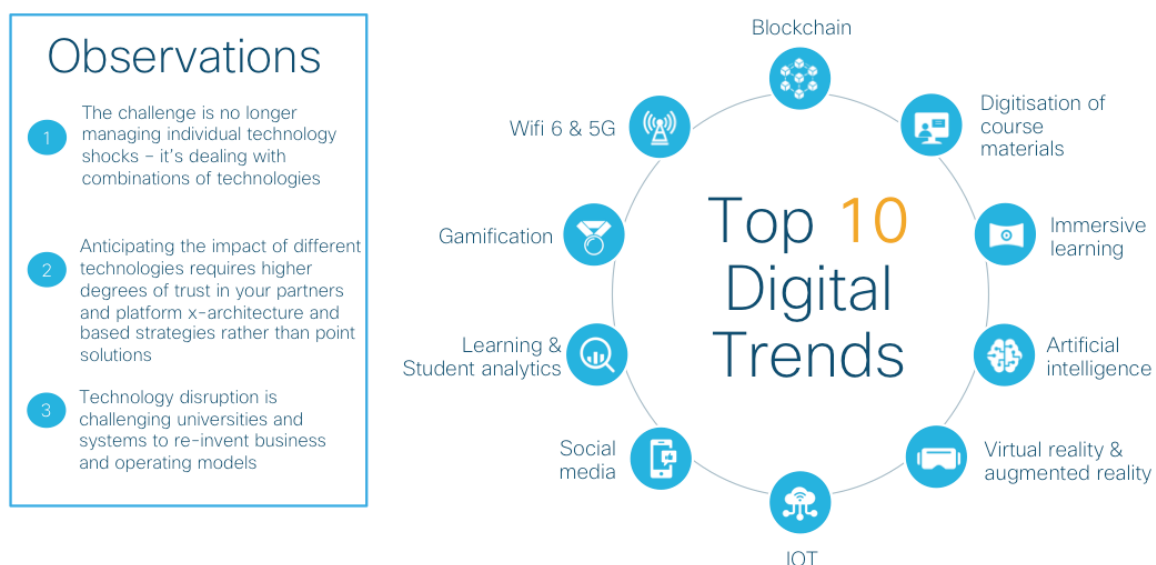
Tipping point

The role of the education CIO has never been more important, or more complex

With technology driving strategy the role of the CIO has been elevated. CIOs are expected to provide business continuity, innovation and data to inform strategic decisions. They are having to do this against a backdrop of immense technology disruption. There are at least 10 discrete technologies and trends that are changing the face of education. Some of these technologies have been used on the fringes for decades but recent developments have either made them more powerful, more accessible or more affordable.

Dealing with the impact of individual technology impacts is challenging enough, but dealing with a collision of various technologies simultaneously is creating significant additional pressure and forcing institutions to identify ways of removing complexity using automation and making sure infrastructure is software defined.

CIOs are faced with massive technology disruption

Observations

1. The challenge is no longer managing individual technology shocks – it's dealing with combinations of technologies

2. Anticipating the impact of different technologies requires higher degrees of trust in your partners and platform x-architecture and based strategies rather than point solutions

3. Technology disruption is challenging universities and systems to re-invent business and operating models

Top 10 Digital Trends

- Blockchain
- Digitisation of course materials
- Immersive learning
- Artificial intelligence
- Virtual reality & augmented reality
- IOT
- Social media
- Learning & Student analytics
- Gamification
- Wifi 6 & 5G

Underlying infrastructure and data capture offers digital resilience and an innovation platform

At a time of uncertainty institutions are looking at where they can make high impact, safe and sustainable investments that will set them up for success. For some of Australia's most innovating universities this has translated into greater priority for software defined networks where automation is built in and where critical infrastructure can be programmed, controlled and centrally monitored. Curtin University and San Jose State University have both upgraded their network and management platforms to be more software-defined and with immediate benefits in terms of scalability, security and reduced complexity.
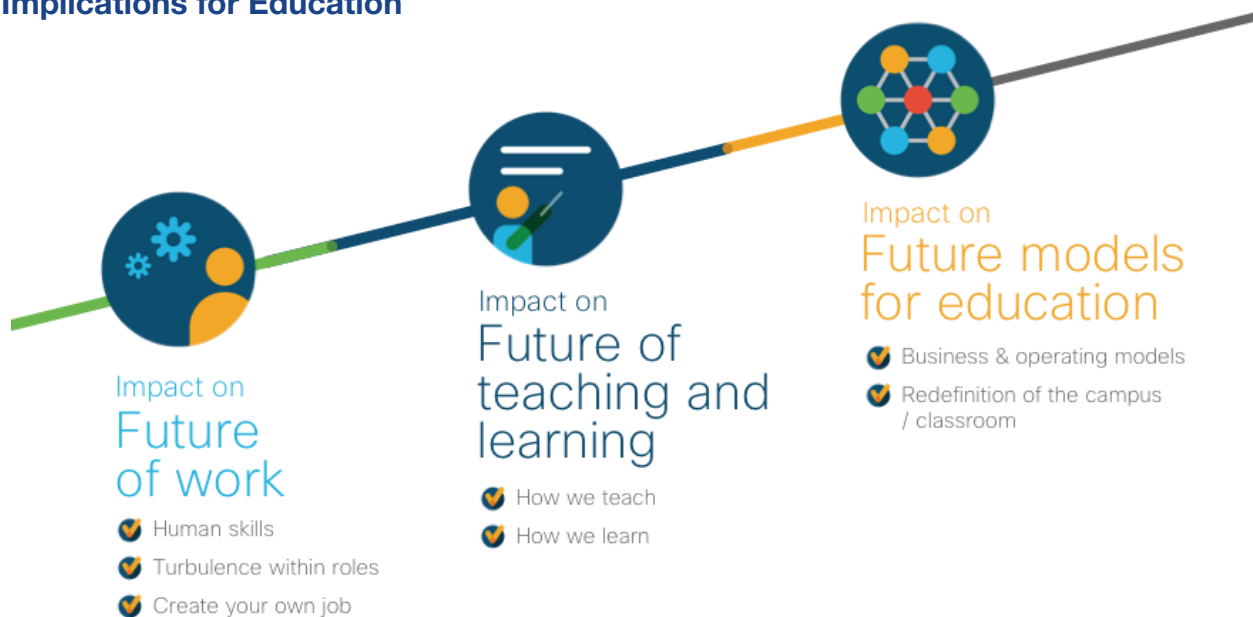
"There is no point focusing on application development if a) your infrastructure can't adequately support them, b) you can't guarantee security and c) you aren't able to monitor even small changes in the network which might cause those applications to stop performing." – University CIO

The impact of digital on education is broadening and deepening

Digital is creating profound changes to the future of work, how we teach and learn and the business and operating models required to implement innovation sustainably. The focus for educators is not necessarily how to get the technology in place but rather how to ensure that the teaching workforce, behaviours and cultures and business models deliver value from those investments.

Implications for Education

Impact on
Future of work

- ✔ Human skills
- ✔ Turbulence within roles
- ✔ Create your own job

Impact on
Future of teaching and learning

- ✔ How we teach
- ✔ How we learn

Impact on
Future models for education

- ✔ Business & operating models
- ✔ Redefinition of the campus / classroom

Conclusion

There was overwhelming feedback that these types of forums play and important role in helping to share good practice and perspectives. It is recommended that a shorter session (60 minutes) be staged quarterly with the next one to be conducted as a virtual forum and focused on the COVID-19 response. Further details will be posted in the Webex Teams space created for the round table event.